

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A fluid distribution assembly for use in a fuel cell comprising:

a [[an]] separator plate having a major face;

a boundary element disposed over said major face; and

a flow field having a channel formed in said separator plate at said major face, said channel and said boundary element defining a cross-sectional configuration which provides a water accumulation region along a length of said channel, said channel having sidewalls defining a width and a depth, an acute angle defined at an interface between said sidewalls and said boundary element, said width continuously decreasing along said depth of said channel in a direction generally away from said boundary element.

2. (original) The fluid distribution assembly of claim 1 wherein said water accumulation region is provided at an acute angle of said cross-sectional configuration.

3. (cancelled)

4. (currently amended) The fluid distribution assembly of claim [[3]] 1 wherein said cross-sectional configuration of said channel is v-shaped.

5. (original) The fluid distribution assembly of claim 4 wherein said cross-sectional configuration comprises an equilateral triangular cross-section.

6. (original) The fluid distribution assembly of claim 4 wherein said triangular cross-sectional configuration comprises an isosceles triangular cross-section.

7. (original) The fluid distribution assembly of claim 1 wherein said cross-sectional configuration of said channel is w-shaped.

8. (original) The fluid distribution assembly of claim 1 wherein said cross-sectional configuration of said channel is trapezoidal.

9. (original) The fluid distribution assembly of claim 1 wherein said cross-sectional configuration of said channel includes a recessed portion.

10. (original) The fluid distribution assembly of claim 1 wherein said recessed portion of said cross-sectional configuration is v-shaped.

11. (previously presented) A fuel cell comprising:

a separator plate including a flow field formed in a major face thereof, said flow field including a channel having a pair of sidewalls; and

a ~~[[an]]~~ membrane electrode assembly disposed at said major face over said flow field;

wherein said pair of sidewalls intersect said membrane electrode assembly to form a cross-sectional geometry having a water accumulation region, said cross-sectional geometry having a width and a depth defined by said sidewalls, an acute angle defined at an interface between said sidewalls and said boundary element, said width continuously decreasing along said depth of said channel in a direction generally away from said boundary element.

12. (cancelled)

13. (currently amended) The assembly of claim ~~[[12]]~~ 11 wherein said acute angle is defined as a function of an aspect ratio of a channel width and a channel depth

14. (original) The assembly of claim 13 wherein said aspect ratio of said channel is in the range of about 0.25 – 10.

15. (currently amended) The assembly of claim ~~[[12]]~~ 11 wherein said water accumulation region is defined in at least one corner of said cross-sectional geometry, said at least one corner having an angle not greater than about 75 degrees.

16. (original) The assembly of claim 15 wherein said at least one corner having an angle in the range of 10 – 60 degrees.

17. (original) The assembly of claim 11 wherein said cross-sectional geometry of said channel comprises at least one water accumulation region at a bottom portion of the channel.

18. (original) The assembly of claim 16, wherein said water accumulation region comprises a v-shaped recess formed in said bottom portion of said channel.

19. (cancelled)

20. (cancelled)